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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/660,966	09/12/2003	Francesco Braghiroli	P/4074-21	6338

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EXAMINER

ALSOMIRI, ISAM A

ART UNIT PAPER NUMBER

3662

DATE MAILED: 12/09/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/660,966

Applicant(s)

BRAGHIROLI, FRANCESCO

Examiner

Isam A Alsomiri

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 September 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12 September 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Drawings

The drawings are objected to because figures 1 and 2 are not clear to show the claimed planes and the orientation of the sensors relative to the wheel or the rim, it is not clear from the figures where is the sensor located relative to the wheel and the claimed planes. A complete drawing showing the setup of the system is required to assist in understating the invention.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

New corrected formal drawings in compliance with 37 CFR 1.121(d) are required in this application. Applicant is advised to employ the services of a competent patent draftsman outside the Office, as the U.S. Patent and Trademark Office no longer prepares new drawings.

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The corrected drawings are required in reply to the Office action to avoid abandonment of the application. The requirement for corrected drawings will not be held in abeyance.

Specification

Arrangement of the Specification

As provided in 37 CFR 1.77(b), the specification of a utility application should (must) include the following sections in order. Each of the lettered items should appear in upper case, without underlining or bold type, as a section heading. If no text follows the section heading, the phrase "Not Applicable" should follow the section heading:

- (a) TITLE OF THE INVENTION.
- (b) CROSS-REFERENCE TO RELATED APPLICATIONS.
- (c) STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR DEVELOPMENT.
- (d) INCORPORATION-BY-REFERENCE OF MATERIAL SUBMITTED ON A COMPACT DISC (See 37 CFR 1.52(e)(5) and MPEP 608.05. Computer program listings (37 CFR 1.96(c)), "Sequence Listings" (37 CFR 1.821(c)), and tables having more than 50 pages of text are permitted to be submitted on compact discs.) or
REFERENCE TO A "MICROFICHE APPENDIX" (See MPEP § 608.05(a). "Microfiche Appendices" were accepted by the Office until March 1, 2001.)
- (e) BACKGROUND OF THE INVENTION.
 - (1) Field of the Invention.
 - (2) Description of Related Art including information disclosed under 37 CFR 1.97 and 1.98.
- (f) BRIEF SUMMARY OF THE INVENTION.
- (g) BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWING(S).
- (h) DETAILED DESCRIPTION OF THE INVENTION.
- (i) CLAIM OR CLAIMS (commencing on a separate sheet).
- (j) ABSTRACT OF THE DISCLOSURE (commencing on a separate sheet).
- (k) SEQUENCE LISTING (See MPEP § 2424 and 37 CFR 1.821-1.825. A "Sequence Listing" is required on paper if the application discloses a nucleotide or amino acid sequence as defined in 37 CFR 1.821(a) and if the required "Sequence Listing" is not submitted as an electronic document on compact disc).

Claim Objections

Claims 1-18 are objected to because of the following informalities: throughout the claims, the term “characterised” is misspelled, it should be “characterized”. Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-18 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. With respect to claims 1 and 11, it is not clear what is meant by the claim language “characterised [sic] in that in at least two planes perpendicular to the axis of rotation the spacings of a plurality of measurement points on a respective periphery of the corresponding part of the wheel from a reference location and the rotary angle positions of the respective measurement points are measured and that the position of the motor vehicle wheel with respect to the axis of rotation is determined from the measurement values” (claim 1); and “characterised [sic] in that a rotary angle sensor (6) for determining the respective rotary angle positions of the scanned measurement points during rotation of the wheel about the axis of rotation (1) is connected to the evaluation device (7), and that the evaluation device (7) has a computer which

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from the spacings of the measurement points from the reference location (5) and the respective rotary angle positions of the measurement points which are on at least two peripheries on parts of the wheel, which peripheries are in planes (19, 20) perpendicular to the axis of rotation (1), determines the position of the motor vehicle wheel (2) and in particular the position of the geometrical axis (8) of the wheel with respect to the axis of rotation (1)” (claim 11). Therefore, the claims need to be rewritten or modified to include punctuations to assist in understanding the claims.

Claims 15 and 16 recites the limitation "the spacing measuring unit". There is insufficient antecedent basis for this limitation in the claim.

Claim 16 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. the disclosure does not described or show the claim limitations “the spacing measuring unit (12) directed on to the peripheral surface of the wheel is mounted movably parallel to the axis of rotation (1)”.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

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Claims 1-7, 11-13, and 17-18 are rejected under 35 U.S.C. 102(a) as being anticipated by anyone of Conheady et al. US 2002/0018218; Boess et al. US 6,414,304; Bartko et al. US 5,731,870; Kitagawa et al. US 6,657,711.

Re claim 1, Conheady discloses in figure 1, a method of determining geometrical data of a motor vehicle wheel 1 mounted rotatably about an axis of rotation 3, in which a plurality of measurement points on the rotating wheel are scanned 6 in contactless mode, characterized in that in at least two planes perpendicular to the axis of rotation the spacings of a plurality of measurement points on a respective periphery of the corresponding part of the wheel from a reference location 4 and the rotary angle positions of the respective measurement points are measured and that the position of the motor vehicle wheel with respect to the axis of rotation is determined from the measurement values (see Abstract). Boess, Bartko, and Kitagawa all disclose similar systems for aligning a wheel by scanning a plurality of measurement points on the rotating wheel in contactless mode.

Re claim 2, Conheady teaches in that the position, in particular the eccentricity and/or the angle of inclination of the geometrical axis of the wheel, with respect to the axis of rotation, is or are determined from the measurement values (see Abstract).

Re claim 3, Conheady teaches in that the measurement points are scanned on a surface of the part of the wheel, which is substantially parallel to the axis of the wheel, and/or a surface of the part of the wheel, which is substantially inclined or perpendicular (see figure 1).

Re claim 4, Conheady teaches in that a lateral wobble (run out) and/or radial wobble (run out) on the wheel is or are ascertained from the measurement values (see figure 1).

Re claim 5, Conheady teaches in that the measurement points are scanned on parts of the wheel of the inside of the wheel and/or the outside of the wheel and/or at the periphery of the wheel (see figure 1).

Re claim 6, Conheady teaches in that the position ascertained from the measurement values, in particular eccentricity and/or inclination of the geometrical axis of the wheel with respect to the axis of rotation is or are used for correction of balancing parameters (balancing mass, angular position) which are ascertained in an unbalance measuring operation (see Abstract).

Re claim 7, Conheady teaches ascertaining the run out data of the rim and the unbalance data of the vehicle wheel in a first positional relationship of the tyre and the rim, and by matching the rim and the tyre in a second positional relationship to minimize the effects of the run out of the rim and of the unbalance of the vehicle wheel (see [0016 – 0019]).

Re claim 11, Conheady discloses in figure 1 an apparatus for determining geometrical data of a motor vehicle wheel 1 mounted rotatably about an axis of rotation 3, comprising a contactless scanning device 6 connected to a spacing measuring device 4 which measures the spacing of a measurement point scanned on the wheel 22 from a reference location 4. and an evaluation device 8 which evaluates the measurement values, characterized in that a rotary angle sensor for determining the respective rotary angle positions of the scanned measurement points during rotation of the wheel about the axis of rotation 3 is connected to the evaluation device 8, and that the evaluation device 8 has a computer which from the spacings of the measurement points from the reference location 4 and the respective rotary angle positions of the measurement points which are on at least two peripheries on parts of the wheel, which

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peripheries are in planes perpendicular to the axis of rotation 3 determines the position of the motor vehicle wheel 1 and in particular the position of the geometrical axis of the wheel with respect to the axis of rotation 3 (see Abstract, see [0006-0019]. Boess, Bartko, and Kitagawa all disclose similar systems for aligning a wheel by scanning a plurality of measurement points on the rotating wheel in contactless mode.

Re claim 12, Conheady discloses in figure 1 the scanning device and the spacing measuring device form a movable spacing measuring unit (see figure 1).

Re claim 13, Conheady discloses in figure 1 the spacing measuring unit (10; 11; 12) is in the form of a triangulation measuring device.

Re claim 17, Conheady discloses in figure 1 the direction of the scanning light beam remains unchanged at least during a revolution of the wheel (see figure 1).

Re claim 18, it's inherent that the rotary angle sensor is non-rotatably coupled to the motor vehicle wheel.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 14, 15, and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Conheady et al. in view of Kitagawa et al. Conheady discloses in figure 1 one spacing measuring unit of which is directed on to the inside of the wheel [0030]. Conheady, is silent

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about using two more spacing measurement units directed on the outside of the wheel and the peripheral surface of the wheel. However, having the extra spacing measurement units is well known. Kitagawa teaches at least two spacing measurement units directed on the side of the tire (which reads on the outside and peripheral surface of the wheel) (see figure 1). It would have been obvious to include the two more sensors for more reliable measurements and alignment compensation.

Claims 8-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Conheady et al. in view applicant's Admitted Prior Art (APA). Conheady is silent about the spacings of measurement points on the pneumatic tyre of the motor vehicle wheel and in particular on one or more peripheral lines about the axis of rotation, relative to a reference location, are measured at different inflation pressures, and ascertaining the run out data of the rim and the stiffness data of the tyre in a first positional relationship of the tyre and the rim, and by matching the rim and the tyre in a second positional relationship to minimize the effects of the run out of the rim and of the difference of stiffness around the circumference of the tyre. APA teaches determining irregularities in the tyre stiffness by measurement at different inflation pressures (see specification page 3 lines 14-33). It would have been obvious to modify Conheady's system to include measurement at different inflation pressure to compensate for tyre stiffness at different locations.

Conclusion

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Isam A Alsomiri whose telephone number is 703-305-5702. The examiner can normally be reached on Monday-Thursday and every other Friday (8:30-5:00).

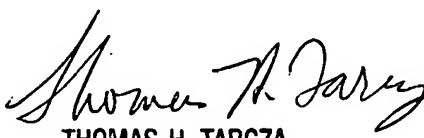
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas H Tarcza can be reached on 703-306-4171. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Isam Alsomiri



December 2, 2004



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